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| 09/698,989      | 10/27/2000  | Jiro Yamada          | 09792909-4658       | 8474             |

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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT PAPER NUMBER

2879

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/698,989

Applicant(s)

YAMADA ET AL.

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 28-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Group I, claims 1-27, in Paper No. 6 is acknowledged.

***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first, second, and third electrodes of independent claim 13 and the electron and hole transport layers of claim 25 must be shown (labeled) or the features canceled from the claims. No new matter should be entered.
3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
5. The following title is suggested: --DISPLAY APPARATUS WITH RIBS HAVING CONDUCTIVE MATERIAL--.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).
8. Claims 1-5 and 7-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim (US 6099746).
9. Regarding independent claim 1, Figure 2c of Kim shows a display apparatus having a plurality of pixels comprising a first electrode (12) formed on a substrate (11); a light-emitting layer (14) formed on the first electrode; and a second electrode (15) formed on the light-emitting layer, wherein the plurality of pixels being partitioned by a rib (13) larger in thickness than the light-emitting layer and having at a conductive material (15) and the conductive material is electrically connected to the second electrode.
10. Regarding claim 2, Kim discloses the rib having an insulating material layer (col. 3, ln. 65).
11. Regarding claims 3-4, Figure 2c of Kim shows the rib having a mesa-formed section such that the width of which becomes wider toward the substrate.

12. Regarding claim 5, Figure 2c of Kim shows a protective film (16) being made of an insulating material or a conductive material and being formed on the second electrode, and Figure 2e of Kim shows a second substrate (17) stacked on the protective film.
13. Regarding claim 7, Figure 2c of Kim shows an insulating film (11) formed under the rib.
14. Regarding claims 8-9, Figure 2c of Kim shows the rib being formed in an island form.
15. Regarding claim 10, Figure 2c of Kim shows the second electrode being integrally formed over the plurality of pixels.
16. Claims 1-2, 5-14, and 17-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawasaki (US 6281552).
17. Regarding independent claims 1 and 13, Figure 16 of Kawasaki shows a display apparatus having a plurality of pixels comprising a field effective transistor (2103) formed on a substrate (2101) and having a first electrode, a second electrode, and a third electrode; an interlayer insulating film (2142) formed on the field effective transistor; a lower electrode (2143) connected to the first electrode through an opening formed as penetrating the interlayer insulating film; an organic layer (2145) formed on the lower electrode and having a light-emitting layer; and an upper electrode (2147) formed on the organic layer, wherein the plurality of pixels are partitioned by a rib (2144b) larger in thickness than the organic layer and having at least a conductive

material (2146) and the conductive material is electrically connected to the upper electrode.

18. Regarding claims 2 and 14, Kawasaki discloses the rib additionally having an insulating material layer (col. 20, ln. 29).
19. Regarding claims 5 and 17, Figure 16 of Kawasaki shows a protective film (2141) made of an insulating material or a conductive material and formed on the second electrode and a substrate (2148) stacked on the protective film.
20. Regarding claims 6 and 18, Figure 16 of Kawasaki shows a resin layer (2142) provided between the protective film and the substrate.
21. Regarding claims 7 and 19, Figure 16 of Kawasaki shows an insulating film (2142) formed under the rib.
22. Regarding claims 8-9 and 20-21, Figure 16 of Kawasaki shows the rib formed in an island form.
23. Regarding claims 10 and 22, Figure 16 of Kawasaki shows the upper electrode integrally formed over the plurality of pixels.
24. Regarding claims 11 and 23, Kawasaki discloses the upper electrode and the conductive material being individually made of different materials (col. 20, last paragraph).
25. Regarding claims 12 and 24, Kawasaki discloses the lower electrode being higher in reflectivity of light than the upper electrode (col. 20, ln 19-21).
26. Regarding claim 25, Figure 16 of Kawasaki shows the organic layer having an electron transport layer (2146) and a hole transport layer (2153).

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27. Regarding claim 26, Figure 16 of Kawasaki shows the field effective transistor of bottom-gate type.

28. Regarding claim 27, Figure 16 of Kawasaki shows the rib positioned roughly above the opening.

***Claim Rejections - 35 USC § 103***

29. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

30. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasaki (US 6281552) in view of Kim (US 6099746).

31. Kawasaki discloses the claimed invention, as discussed earlier, but fails to exemplify the rib having a mesa-formed section such that the width of which becomes wider toward the substrate.

32. Kim teaches that it is known in the art to provide a display apparatus with a rib having a mesa-formed section, as discussed earlier in regards to claims 3-4, for stabilizing the structure and enhancing the fabrication of the device (col. 4, ln. 5).

33. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the display apparatus of Kawasaki with the rib structure of Kim for providing stability to the structure.

**Conclusion**

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mori (US 6411033) discloses a flat type PDP with start points. Ohtani (US 6303963) discloses an electro-optical device with TFT. Yamazaki (US 6420834) discloses a light-emitting device metal portion of bank.


**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (703) 308-6546. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Kevin Quarterman  
Examiner  
Art Unit 2879

kq   
March 5, 2003

  
Vip Patel  
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